

FIG. 1

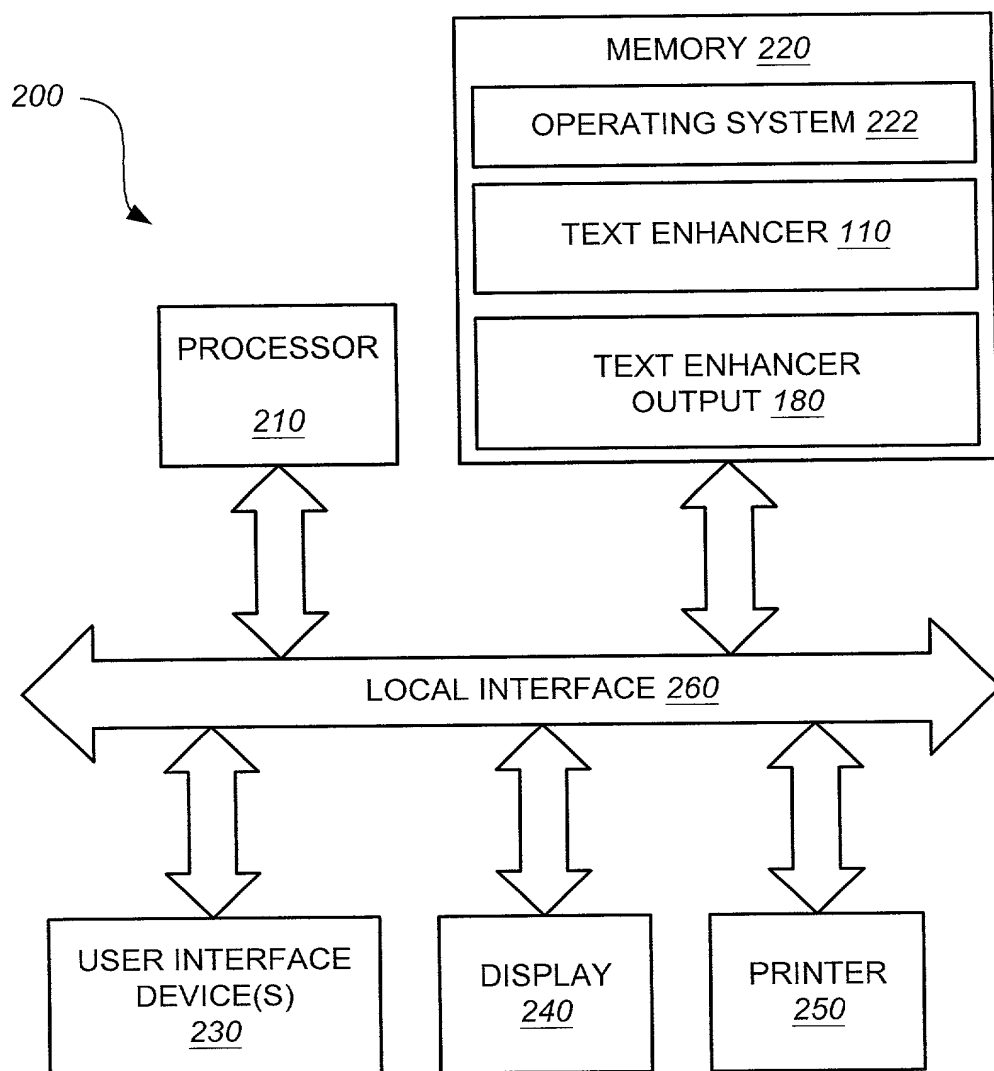


FIG. 2

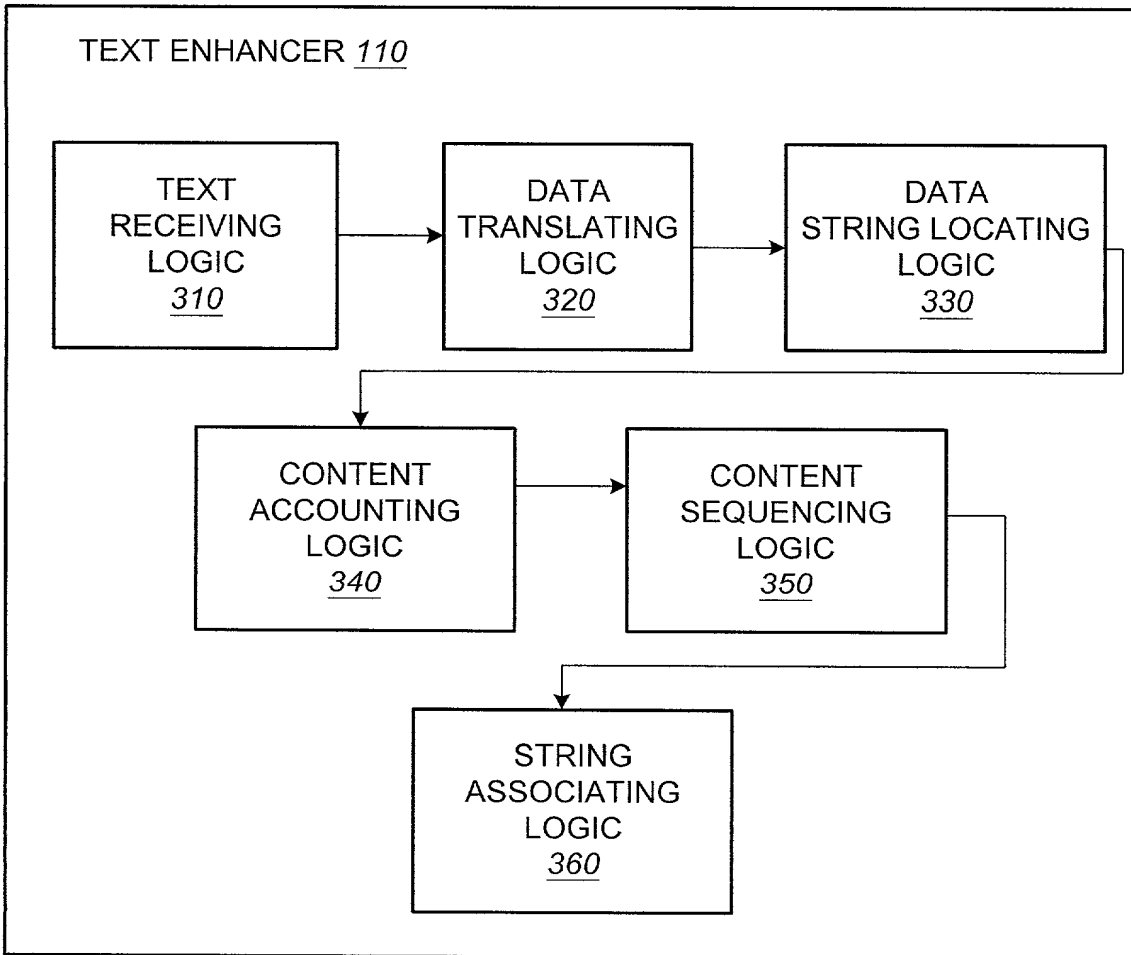


FIG. 3

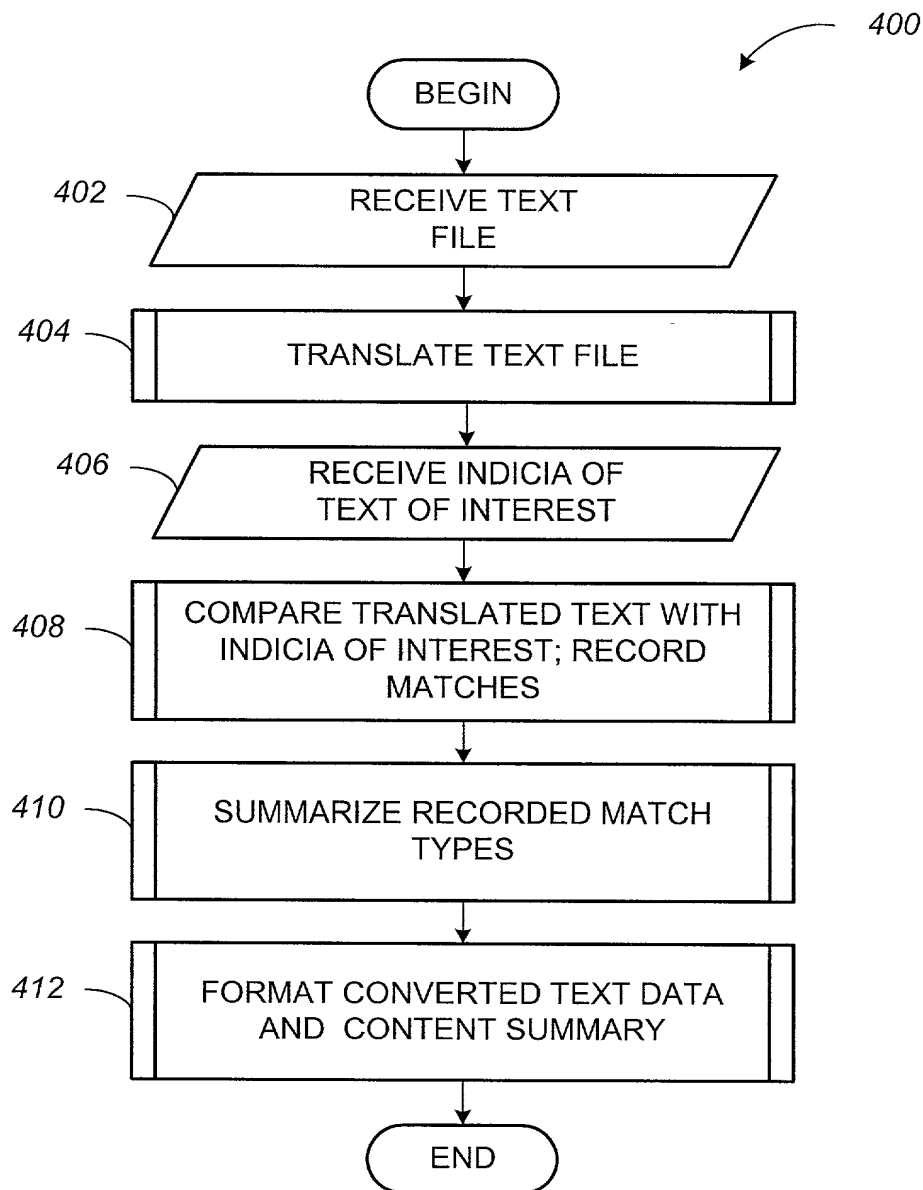


FIG. 4

113a

Checking tokens in file c:\5dx\ndf\7OFD1JL\PANEL.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\PACKAGE.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\LANDPAT.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\PADGEOM.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\ALGSLICE.NDF.
Checking tokens in file C:\5DX\5dx\IAS\FAMALGNM.DAT.
Checking tokens in file c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\ALGO_VER.NDF.
Could not open c:\5dx\ndf\7OFD1JL\ALGO_VER.NDF
Panel name = FAMILIES_ALL_RLV
NDF path = C:\5DX\NDF\
RTF path = C:\5DX\RTF\
IAS path = C:\5DX\5dx\IAS\
CALIB path = C:\5DX\5dx\CALIB\
Deleting RTF Panel file c:\5dx\rtf\7OFD1JL\PANEL.RTF
Deleting Board RTF: c:\5dx\rtf\7OFD1JL\BOARD.RTF
Opening file = C:\5DX\5dx\IAS\FAMALGNM.DAT (Algorithm families)
Opening file = c:\5dx\ndf\7OFD1JL\ALGO_VER.NDF (Algorithm versions)
Cannot open c:\5dx\ndf\7OFD1JL\ALGO_VER.NDF
Using most recent version for all families.
Opening file = C:\5DX\5dx\IAS\XMAPMETH.DAT (Board Thickness Techniques)
Opening file = c:\5dx\ndf\7OFD1JL\ALGSLICE.NDF (Algorithms and slice heights)
Opening file = c:\5dx\ndf\7OFD1JL\PANEL.NDF (panel)
Board material identifier = 6337_Cu (default)
Panel rotation = 90
Stage speed = 2
Panel Dimensions: dx = 5874, dy = 11399, dz = 81
WARNING: illegal character . in board identifier 5064_8726.7_A
WARNING: illegal character . in board identifier 5064_8726.7_B
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF (Fov data)
Default minimum margin = 0
Opening file = C:\5DX\5dx\CALIB\SCRNMAP.400 (Screen Distortion Map)
WARNING: Cannot open screen distortion map file C:\5DX\5dx\CALIB\
SCRNMAP.400
Will assume there is zero screen distortion for this FOV.
Opening file = C:\5DX\5dx\CALIB\SCRNMAP.650 (Screen Distortion Map)
WARNING: Cannot open screen distortion map file C:\5DX\5dx\CALIB\
SCRNMAP.650
Will assume there is zero screen distortion for this FOV.
Opening file = C:\5DX\5dx\CALIB\SCRNMAP.800 (Screen Distortion Map)

FIG. 5A

113b

WARNING: Cannot open screen distortion map file C:\5DX\5dx\CALIB\SCRNMAP.800
Will assume there is zero screen distortion for this FOV.
FOV bank 1: xfov = 400.0, yfov = 400.0
FOV bank 2: xfov = 650.0, yfov = 650.0
FOV bank 3: xfov = 800.0, yfov = 800.0
Number of board names = 2

Output board name = 5064_8726.7_A,180,BTM,5064_8726.7_B,270,0,0

About to process board = 5064_8726.7_B
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\CAMERA.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\SURFMAP.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\FOV_DATA.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JSAD8L\FOV_DATA.NDF
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\COMPONEN.NDF (component)
Number of component names = 449
Number of package names = 13
There are 449 loaded components.
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF (board)
BOARD DIMENSIONS: dx = 5874, dy = 11399, dz = 81
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\PACKAGE.NDF (package)
Number of pin names = 324
Number of pintype names = 20
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\LANDPAT.NDF (land pattern)
Checking for SM components
checking for SM pads
Opening file = c:\5dx\ndf\7OFD1JL\PADGEOM.NDF (pad geometry)
Checking for TH components
checking for TH pads

About to process board = 5064_8726.7_A
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\CAMERA.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\SURFMAP.NDF.

FIG. 5B

113c

Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\COMPONEN.NDF (component)
Number of component names = 738
Number of package names = 51
There are 289 loaded components.
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (board)
BOARD DIMENSIONS: dx = 11399, dy = 5874, dz = 81
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\PACKAGE.NDF (package)
Number of pin names = 324
Number of pintype names = 20
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\LANDPAT.NDF (land pattern)
Checking for SM components
checking for SM pads
Opening file = c:\5dx\ndf\7OFD1JL\PADGEOM.NDF (pad geometry)
Checking for TH components
checking for TH pads
Removing existing board thickness file c:\5dx\rtf\7OFD1JL\1IRR58FO\BRDTHICK.RTF
Setting pad orientations
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF (Board Alignment)
Align 1 is undefined.
Align 2 is undefined.
Align 3 is undefined.
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\CAMERA.NDF (camera index)
Default FG index = 1
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF (noise reduction)
Default noise reduction count = 0
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\EXCLZONE.NDF (exclusion zone)
File c:\5dx\ndf\7OFD1JL\1JSAD8L\EXCLZONE.NDF does not exist.

Setting pad orientations
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (Board Alignment)

FIG. 5C

113d

Align 1 component/pin = U18 52
Align 2 component/pin = U10 40
Align 3 component/pin = U7 52
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\CAMERA.NDF (camera index)
Default FG index = 1
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF (noise reduction)
Default noise reduction count = 0
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\EXCLZONE.NDF (exclusion zone)
File c:\5dx\ndf\7OFD1JL\1JRAC8K\EXCLZONE.NDF does not exist.

About to sort 449 components
About to sort 289 components
Opening file = c:\5dx\ndf\7OFD1JL\ALGSLICE.NDF (sliceHeights)
Creating max subtypes file = c:\5dx\rtf\7OFD1JL\1JRAC8K\ALGO_CFG.RTF
Making views. Using PAD BASED MERGING.
Making views. Using PAD BASED MERGING.
alignment view #1 : U18 (52) : U18 (53)
alignment view #2 : U10 (40) : U10 (41)
alignment view #3 : U7 (52) : U7 (53)
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (Thickness Pads)
Sorting views into inspection path
FOV index = 2, Resolution = 1024 pixels
about to sort 12 views.
number of untwist passes = 2
FOV index = 3, Resolution = 1024 pixels
about to sort 208 views.
number of untwist passes = 5
Creating sorted joint xref file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SJN_XREF.RTF
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\SURFMAP.NDF (surface map)
Sorting views into inspection path
FOV index = 1, Resolution = 512 pixels
about to sort 42 views.
number of untwist passes = 3
Number of surface map points = 42
number of lines = 861
Number of lines in array = 861
Done sorting lines
Number of lines in triangles = 114
Number of triangles = 73

FIG. 5D

113e

Triangle limit angle = 10.0 degrees
Number of processed triangles = 63
Creating slice algs file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SLICEALG.RTF
Creating algorithm file = c:\5dx\rtf\7OFD1JL\1IRR58FO\ALGOLIST.RTF
Creating view heights file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SLICE_ZS.RTF
creating report file = c:\5dx\rtf\7OFD1JL\1IRR58FO\ALGO_RPT.RTF
creating view file = c:\5dx\rtf\7OFD1JL\1IRR58FO\VIEWLIST.RTF
creating subview file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SUBVIEWS.RTF
creating joint file = c:\5dx\rtf\7OFD1JL\1IRR58FO\JOINTLST.RTF
Writing file c:\5dx\rtf\7OFD1JL\1IRR58FO\DEV_LIST.RTF by component
Writing file c:\5dx\rtf\7OFD1JL\1IRR58FO\DEV_LIST.RTF by view
Attempting to open file = c:\5dx\rtf\7OFD1JL\BOARD.RTF
Creating surface map file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SURF_MAP.RTF
Creating fov cross reference file = c:\5dx\rtf\7OFD1JL\1IRR58FO\FOV_XREF.RTF
Setting RPTCAD Theta: Panel 90
Setting RPTCAD Theta: Board 180
Setting RPTCAD Theta: Final 270
Creating RPTCAD File: c:\5dx\rtf\7OFD1JL\1IRR58FO\RPTCAD.RTF

This is a DOUBLE sided board.

There are 169 views with 1 slice.

There are 51 views with 2 slices.

FOV	#Views	#Slices	#Joints
650.0	12	12	416
800.0	208	259	4314
TOTAL	220	271	4730

Creating alignment joint file = c:\5dx\rtf\7OFD1JL\ALIGNPAD.RTF
Creating alignment view file = c:\5dx\rtf\7OFD1JL\ALIGNVIEW.RTF
Creating alignment view index file = c:\5dx\rtf\7OFD1JL\MAT_INFO.RTF
Creating panel file = c:\5dx\rtf\7OFD1JL\PANEL.RTF
CADTRAN: done. 5 warnings. 0 Unused Surface Map Points.

FIG. 5E

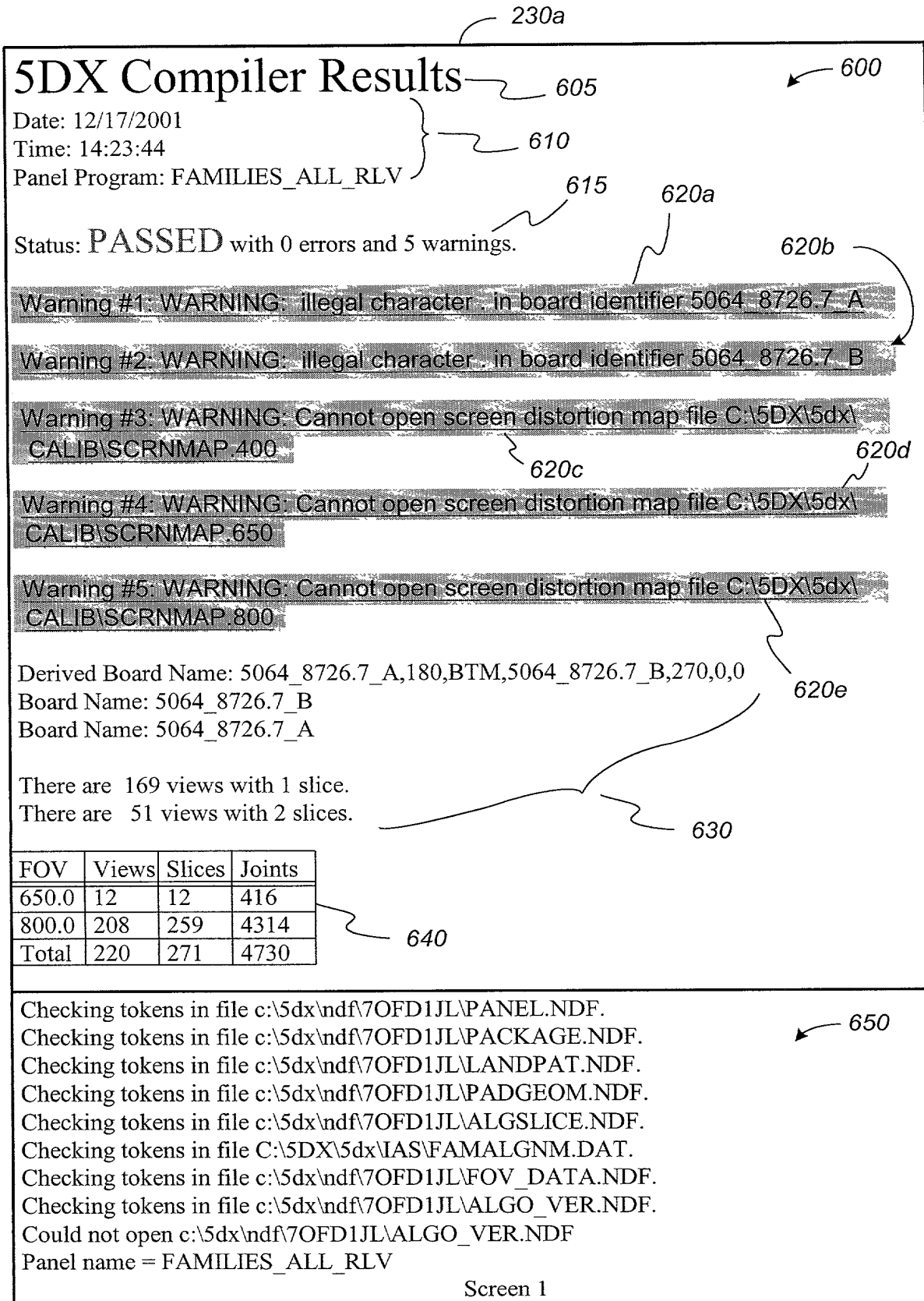


FIG. 6A

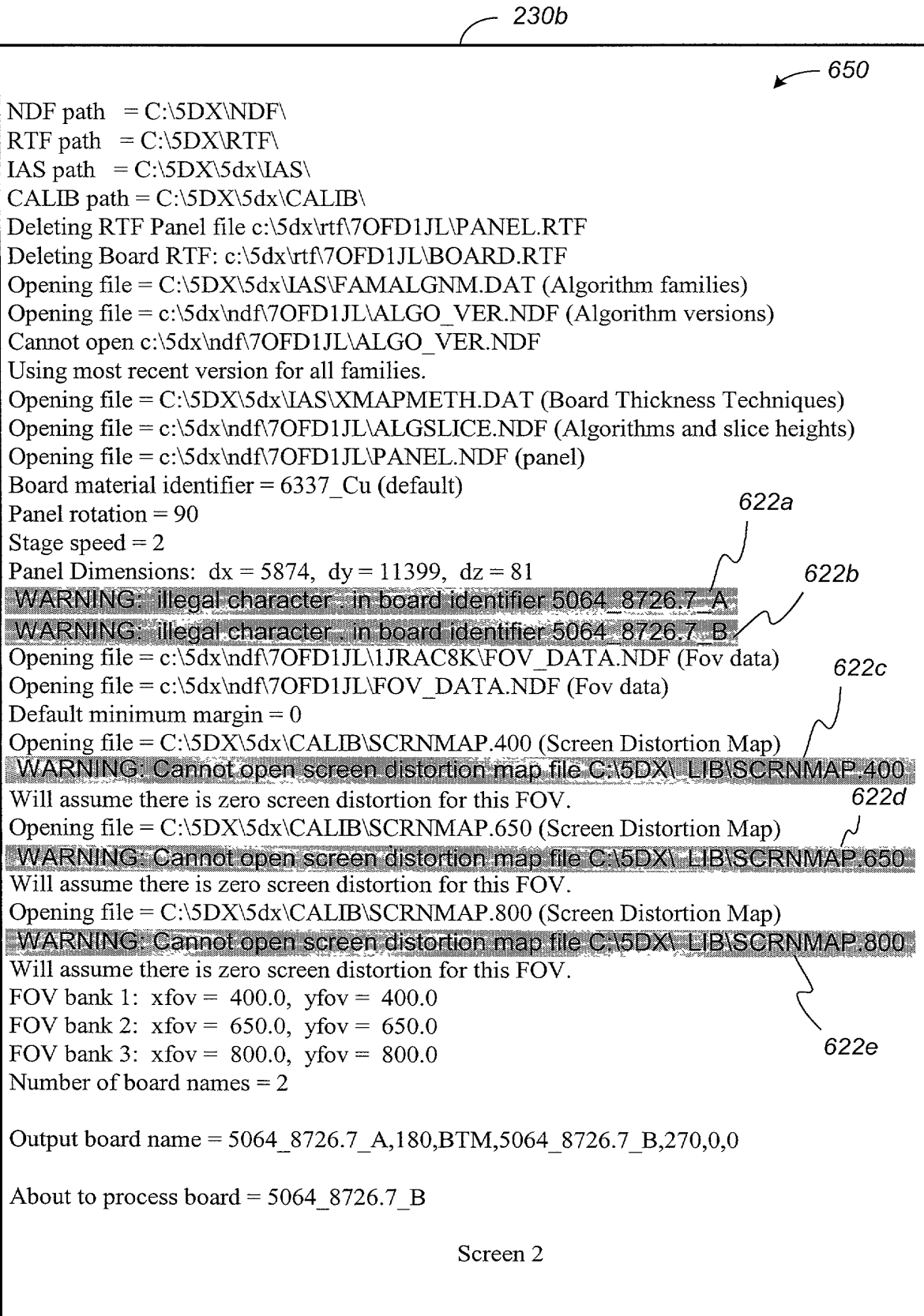


FIG. 6B

230c

650

Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\CAMERA.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\SURFMAP.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JSAD8L\FOV_DATA.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JSAD8L\FOV_DATA.NDF
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\COMPONEN.NDF (component)
Number of component names = 449
Number of package names = 13
There are 449 loaded components.
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF (board)
BOARD DIMENSIONS: dx = 5874, dy = 11399, dz = 81
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\PACKAGE.NDF (package)
Number of pin names = 324
Number of pintype names = 20
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\LANDPAT.NDF (land pattern)
Checking for SM components
checking for SM pads
Opening file = c:\5dx\ndf\7OFD1JL\PADGEOM.NDF (pad geometry)
Checking for TH components
checking for TH pads

About to process board = 5064_8726.7_A
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\CAMERA.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\SURFMAP.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF.
Checking tokens in file c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF.
Could not open c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\COMPONEN.NDF (component)
Number of component names = 738
Number of package names = 51
There are 289 loaded components.
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (board)
BOARD DIMENSIONS: dx = 11399, dy = 5874, dz = 81

Screen 3

FIG. 6C

230d

650

Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\PACKAGE.NDF (package)
Number of pin names = 324
Number of pintype names = 20
Checking for SM components
Checking for TH components
Opening file = c:\5dx\ndf\7OFD1JL\LANDPAT.NDF (land pattern)
Checking for SM components
checking for SM pads
Opening file = c:\5dx\ndf\7OFD1JL\PADGEOM.NDF (pad geometry)
Checking for TH components
checking for TH pads
Removing existing board thickness file c:\5dx\rtf\7OFD1JL\1IRR58FO\BRDTHICK.RTF
Setting pad orientations
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\BOARD.NDF (Board Alignment)
Align 1 is undefined.
Align 2 is undefined.
Align 3 is undefined.
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\CAMERA.NDF (camera index)
Default FG index = 1
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\NOISERED.NDF (noise reduction)
Default noise reduction count = 0
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\EXCLZONE.NDF (exclusion zone)
File c:\5dx\ndf\7OFD1JL\1JSAD8L\EXCLZONE.NDF does not exist.

Setting pad orientations
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (Board Alignment)
Align 1 component/pin = U18 52
Align 2 component/pin = U10 40
Align 3 component/pin = U7 52
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\FOV_DATA.NDF (Fov data)
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\CAMERA.NDF (camera index)
Default FG index = 1
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\NOISERED.NDF (noise reduction)
Default noise reduction count = 0
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\EXCLZONE.NDF (exclusion zone)
File c:\5dx\ndf\7OFD1JL\1JRAC8K\EXCLZONE.NDF does not exist.

Screen 4

FIG. 6D

230e

650

About to sort 449 components
About to sort 289 components
Opening file = c:\5dx\ndf\7OFD1JL\ALGSLICE.NDF (sliceHeights)
Creating max subtypes file = c:\5dx\rtf\7OFD1JL\1JRAC8K\ALGO_CFG.RTF
Making views. Using PAD BASED MERGING.
Making views. Using PAD BASED MERGING.
alignment view #1 : U18 (52) : U18 (53)
alignment view #2 : U10 (40) : U10 (41)
alignment view #3 : U7 (52) : U7 (53)
Opening file = c:\5dx\ndf\7OFD1JL\1JRAC8K\BOARD.NDF (Thickness Pads)
Sorting views into inspection path
FOV index = 2, Resolution = 1024 pixels
about to sort 12 views.
number of untwist passes = 2
FOV index = 3, Resolution = 1024 pixels
about to sort 208 views.
number of untwist passes = 5
Creating sorted joint xref file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SJN_XREF.RTF
Opening file = c:\5dx\ndf\7OFD1JL\1JSAD8L\SURFMAP.NDF (surface map)
Sorting views into inspection path
FOV index = 1, Resolution = 512 pixels
about to sort 42 views.
number of untwist passes = 3
Number of surface map points = 42
number of lines = 861
Number of lines in array = 861
Done sorting lines
Number of lines in triangles = 114
Number of triangles = 73
Triangle limit angle = 10.0 degrees
Number of processed triangles = 63
Creating slice algs file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SLICEALG.RTF
Creating algorithm file = c:\5dx\rtf\7OFD1JL\1IRR58FO\ALGOLIST.RTF
Creating view heights file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SLICE_ZS.RTF
creating report file = c:\5dx\rtf\7OFD1JL\1IRR58FO\ALGO_RPT.RTF
creating view file = c:\5dx\rtf\7OFD1JL\1IRR58FO\VIEWLIST.RTF
creating subview file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SUBVIEWS.RTF
creating joint file = c:\5dx\rtf\7OFD1JL\1IRR58FO\JOINTLST.RTF
Writing file c:\5dx\rtf\7OFD1JL\1IRR58FO\DEV_LIST.RTF by component
Writing file c:\5dx\rtf\7OFD1JL\1IRR58FO\DEV_LIST.RTF by view
Attempting to open file = c:\5dx\rtf\7OFD1JL\BOARD.RTF
Creating surface map file = c:\5dx\rtf\7OFD1JL\1IRR58FO\SURF_MAP.RTF

Screen 5

FIG. 6E

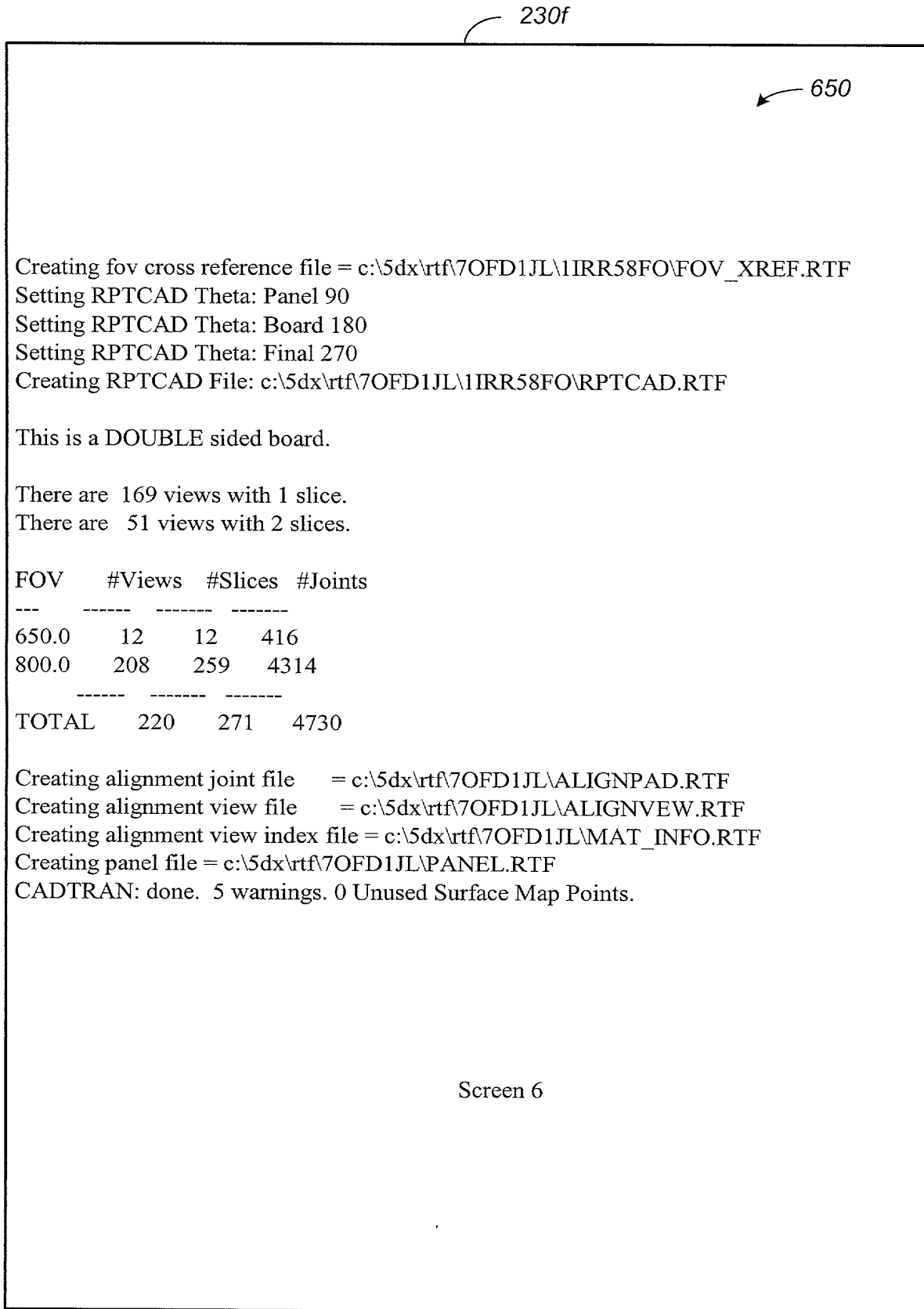


FIG. 6F

